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THE RELEVANCE OF DOSES FOR COMPARING HALOPERIDOL, RISPERIDONE AND OLANZAPINE

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Introduction: When comparing the efficay of antipsychotics in clinical studies it would be of high practical relevance to know which doses of the respective drugs would result in equivalent blocking of dopamine-D2-receptors. This study aimed to find clinically applicable dose equivalents for haloperidol, risperidone and olanzapine.

Method: As the occurrence of EPS correlates closely with a blockade of about 80 % or more of dopamin-D2-receptors the proportion of patients developing EPS in relation to various doses of either Haloperidol (n=5252), risperidone (n=5017) or olanzapine (n =5029) was calculated. This retrospective, observational study included 20.252 inpatients from 20 hospitals with a diagnosis of schizophrenia and related disorders (ICD10 F20-25). The prescription of anticholinergic medication was utilized as surrogate parameter for the occurrence of EPS. OR, RR and NNH under different doses of AP were calculated and data entered into a probit model to predict the risk of EPS over a continuous dose range. For filtering the data ToscanaJ (FBA) was used.

Results:

1.) Same doses of risperidone and haloperidol induced the same proportion of EPS, reflected in a constant dose ratio of both drugs of ~ 1:1 over the whole dose range.

2.) Over the whole dose range there was no linear relation between olanzapine on one hand and haloperidol and risperidone on the other hand.

3.) The results were corroborated by the probit analysis.

Conclusions: Previous clinical trials comparing olanzapine, risperidone and haloperidol found higher risks of EPS for Haloperidol. We propose a new model to calculate dose equivalents.

https://doi.org/10.1016/S0924-9338(10)70982-2 Published online by Cambridge University Press